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## Heal+: Master in Health Informatics

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# Project Quality Framework

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### Internal Quality Assurance

Reviewer 1: Salvador Sanchez (UAH)

Reviewer 2:

## Document Revision History

Vers.	Date	Partner(s)	Comments
0.1	19 Sep 2016	SU	Initial outline, Harko Verhagen
0.2	5 December 2016	SU	Updated after Salvador Sanchez
0.3	23 December 2016	SU	Updated after review Muhamnad Quwaider
Final	30 December 2016	SU	Final version, 0.3 approved

# Executive Summary

This deliverable defines the Heal+ Quality Framework (HQB), which lays out quality assurance related guidelines, templates and rules for ensuring acceptable quality of project outputs. It is the basis of all continuous quality assurance measures taken in WP3: Evaluation and Quality Assurance. It will be administered and maintained by the Heal+ Quality Manager.

The Heal+ Quality Framework establishes the project structure in accordance with provisions in the Partnership Agreements. It includes a Project Management Committee that will take project wide decisions, including the Project Coordinator, Project Manager, and partner representatives. Quality assurance related communication will mainly be among WP leaders, the Quality Manager, and the Project Management Committee.

The HQF also defines guidelines for collaboration, including the use of the online collaboration system for document sharing including meeting protocols. It further defines task quality assurance mechanisms including templates and procedures for authoring and reviewing deliverables.

The first version of the document was unanimously approved by the HEAL+ consortium members present at the first yearly meeting in Amsterdam (the Netherlands) in September 2016.

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# List of Abbreviations

DoW	Description of Work
EACEA	Education, Audiovisual and Culture Executive Agency of the EU, responsible for the Erasmus + programme amongst others.
ECTS	European Credit Transfer System. A unit to measure the workload of courses, with 60 ECTS equalling to one year of full-time studies.
EQF	European quality framework
HQF	Heal+ Quality Framework
LFM	Logical Framework Matrix
PA	Partnership Agreement
PB	Project Board
WP	Work Package

# 1 Introduction

This deliverable defines the HEAL+ Quality Framework (HQP). The deliverable is the basis of all continuous quality control measures taken in WP3 “Evaluation and Quality Assurance” which is led by Stockholm University (SU). WP3 is responsible for the organization and enforcement of all quality assurance mechanisms in the HEAL+ project.

Quality Assurance (QA) refers to administrative and procedural activities implemented in a quality system so that requirements and goals for a product, service or activity will be fulfilled. It is the systematic measurement, comparison with a standard, monitoring of processes and an associated feedback loop that confers error prevention. The HQF defines the project-wide QA procedures and guidelines. It mainly builds on quality related aspects found in the HEAL+ description of work. In addition it borrows ideas from several other quality plans in other EU projects, including [1], [2], [3], [4], [5], [6], [7], [8], and [9]. The HQF was elaborated during the first year of the project and then presented to the general assembly in September 2016, at the yearly meeting in Amsterdam. During the meeting controversial aspects of the framework were discussed and a consensus was reached. This document therefore reflects agreed procedures and guidelines.

## 1.1 Purpose and Scope

The HQF defines procedures, guidelines and templates for the following activities to be performed and outputs to be produced in HEAL+ according to the DoW:

- QA procedures for the project
- Requirements, protocol and practices for
  - Performance assurance of WPs and tasks, including:
    - A set of methods for defining micro objectives within each WP to assure progress
    - Define / adopt evaluation tools, e.g. meetings, questionnaires, impact assessment, to be used by all partners and stakeholders in order to collect feedback on project activities and outcomes
  - Preparation and review of deliverables and meetings
  - Conducting workshops such as training workshops
  - Dissemination: face-to-face meetings, website, virtual communities, brochures, posters, presentations, etc.
- Heal+ guidelines and templates for documents, in particular for deliverables and meetings

The HQF neither replaces nor amends the grant agreement between the coordinator and the EACEA or the partnership agreements between the coordinator and the project partners. It serves to complement these legally binding documents with a framework that describes procedures to ensure compliance with the description of work and high quality of the outputs.

## 1.2 Sources

The main descriptions of work and regulations in HEAL+ that underlie the HQF are:

- The DoW:
  - Work package descriptions
  - Partner descriptions
  - Task/Deliverable descriptions
- Logical Framework Matrix (LFM), submitted with the grant proposal
- Partnership agreement
- Tempus handbook

## 1.3 Quality Manager (QM)

The QM is responsible and contact person for all issues related to administering, implementing and maintaining the HEAL+ Quality Framework. These responsibilities include:

- Maintaining the HQF after its initial release
- Managing the administration of the HQF during the project implementation
- Coordinating the intermediate (M12, M24) and final (M36) quality reports
- Ensuring timely accomplishment of the project tasks
- Assuring high quality and contractual compliance of all deliverables; together with the program manager the QM will manage the deliverable reviewing process
- Representing the QA perspective in regular virtual meetings as part of the task QA (see Section 3) and communicating with WP leaders to ensure task progress
- Acting as the main contact for WP leaders and Project Board (PB) on all quality assurance-related activities and providing clarification and consultation on any issue related to the HQF

Incumbent:

- Quality Manager: Harko Verhagen (SU)

## **1.4 EACEA Project Officer (PO)**

Contact point for the Project Coordinator at the EACEA. According to Erasmus+ regulations the PO shall not be contacted directly by project partners. Project partners shall contact the Project Coordinator about any concerns that need communication with the PO.

## **1.5 External Stakeholders**

Some of the external stakeholder groups of relevance to the HEAL+ project are industrial representatives, student representatives, official delegations from Education and Higher Education ministries, and others. External stakeholders will be consulted on a per-needed basis by the project partners, e.g. for market analysis, stakeholder surveys, dissemination, etc.

# **2 Decision Making at Work Package Level**

Decision making depends on the scope of the decision.

## **2.1 Task Scope**

Decisions at task scope are taken by WP leader in consultation with the WP partners.

## **2.2 Work Package Scope**

In decisions affecting a single WP, each partner with resources in that WP will have one vote each. The WP leader conducts the voting and announces the result.

## **2.3 Project Scope**

For decisions affecting multiple active or future WPs, or the whole project, a PB meeting must be called (see WP5.1).

# **3 Task Quality Assurance**

Tasks are the most concrete structural component of the work description that drive project progress. Quality management therefore needs to put particular emphasis of task-level QA.

Tasks are led by the leader of the respective work package in the DoW. The work package leaders, or their appointed representatives, are therefore held responsible for the execution of the tasks in their work package(s).

In the case of written task deliverables, the report of the work carried out in the task will be submitted to the Quality Manager for internal review. If deemed necessary an additional reviewer may be involved (this is detailed in Section 4.1 below).

The Project Management Committee (PMC) will overview the work done by all members of the team. The PC will ensure that all comments are considered by the task leaders before distributing / submitting the final versions.

Specific measures supporting task QA:

- There shall be a **regular PB meeting** (e.g., monthly or bi-monthly) initiated by the PC where the progress of active tasks will be discussed, as well as the plans for immediate or important upcoming tasks will be coordinated and discussed. Typically the meeting will be held as a virtual conference announced by the PC. Alternatively, the meeting can be held during a physical event.
- The task and work package leaders shall immediately report to the PC if there are any critical issues, e.g. non-cooperation by task partners, unexpected delays, etc.

## 4 Deliverables

Results of the project work are reported in deliverables. Deliverables must address the objectives and activities defined in the work package description. Every deliverable must meet appropriate standards for:

- Achievements and professional quality of work
- Coverage of the topics stated in the contract
- Handling of problems or errors (if appropriate)
- Level of detail and amount of supporting information provided to the user
- Security and confidentiality considerations
- The approach or action taken

### 4.1 Internal Review and Finalization

All written deliverables should be subject to internal reviewing as follows.

The editor of the deliverable should send the deliverable for reviewing to the Quality Manager (or a deputy of the Quality Manager or any European partner involved in the quality management work package). This should be done at least one week before the deadline. Additional internal and/or external reviews can be requested from project partners by the Quality Manager or the editor of the deliverable.

Reviewers should optimally put their comments directly into the deliverable file, using the commenting and change tracking features in the text editing software. The reviewer comments should be duly considered by the deliverable editor.

After internal reviewing, the Quality Manager shall upload the final version of the deliverable as a PDF document to the “Final Deliverables” folder in the project website and/or cooperation area (Google Drive).

## 4.2 Deliverable Types

HEAL+ deliverables are of different types. These types are defined in the deliverable list in the DoW. Not all of these deliverables types necessarily require a written report although it is suggested that deliverables come at least with a document using the deliverable template title sheet and an executive summary. Each deliverable may include:

- Methodology: can be described by different means; suggested to use the deliverable template
- Report: must use the deliverable template
- Event: use the deliverable template and include an event report (including agenda, participants, minutes, and other relevant information items)
- Other Products: as defined by the WP leader, or as indicated in the task description
- Learning Resources: e-learning material
- Teaching Material: as defined by the WP leader, or as indicated in the task description.

## 4.3 Course Specification Template

Courses developed in HEAL+ need to be specified using a uniform template. The template to be used in HEAL+ is provided in the templates and logo folder on the project and included in Appendix A below.

## 4.4 Teaching Material Template

A template for teaching material will be produced and shared in the templates and logo folder on the project website in time for the start of the content production.

## 4.5 European Quality Framework

The European quality framework (EQF) [10] is the base for the quality work of the pedagogics of the project. The Second cycle (Master's level) typically include 90-120 ECTS credits, with a minimum of 60 credits at the level of the 2<sup>nd</sup> cycle

Qualifications that signify completion of the second cycle (e.g. Master's degrees) are awarded to students who:

- have demonstrated knowledge and understanding that is founded upon and extends and/or enhances knowledge and understanding typically associated with the first cycle, providing a basis or opportunity for originality in developing and/or applying ideas, often within a research context;
- can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study;
- have the ability to integrate knowledge, handle complexity, and formulate judgements with incomplete or limited information, including reflection on social and ethical responsibilities linked to the application of their knowledge and judgements;
- can clearly and unambiguously communicate their conclusions and the knowledge and rationale underpinning these to specialist and non-specialist audiences;
- have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.

The second cycle (e.g. Master's degrees) of the Qualifications Framework of the European Higher Education Area refers to level 7 of the European Union's European Qualifications Framework. The learning outcomes relevant to Level 7 are:

- highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research
- critical awareness of knowledge issues in a field and at the interface between different fields
- specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields
- manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches
- take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams

The courses to be developed will fulfil both of these lists as well as the relevant rules and regulations in the respective partner countries. Learning outcomes at the level of the individual courses will be specified in terms relating to these goals (see Appendix A for the course template). The portfolio of courses will also contain a mix of assessment methods.

## 5 Quality Reporting

Concurrent with the management reports in M12, M24, and M36, an intermediate (M12, M24) and final (M36) quality report will be produced as part of work in WP3. These reports will summarize the quality assurance process and results, obstacles and recommendations on project quality. The Quality Manager will be responsible for coordinating the production of these reports.

## 6 Risks

The risks and contingencies mentioned in the Logical Framework Matrix and the DoW shall be continually observed by WP leaders, and periodically by the PB in the regular PB meetings. Any additional risks and risk mediation plans shall be documented on the project website and distributed to the consortium.

## 7 Implementation

The HEAL+ Quality Framework takes immediate effect after approval at the kick-off meeting. Changes to the framework require approval by the PB and must be communicated to the consortium.

Responsible for the administration, enforcement and maintenance of the HEAL+ Quality Framework is the appointed Quality Manager.

When the Quality Manager retires (for whatever reason), SU as leader of WP3 will contact the coordinator and initiate a recruiting and voting for a replacement.

# References

- [1] Hristozova, G., Klessova, S.: Management and Quality Plan. Deliverable D1.1, ACCESSRU project, January 2010 (2010)
- [2] eutempusglobe.org: Quality Assurance and Stakeholders Involvement. Available online: <http://www.eutempusglobe.org/quality.php> (last access: 25 September 2016)
- [3] COMPAS Consortium: D8.1 Project Quality Plan (2008)
- [4] Toni, A., Tona, P.: Quality Plan. Deliverable D1.1, Compass4D project (2013)
- [5] INTECS S.p.A.: Project Quality Plan. Deliverable D9.1.2, ICSI project (2013)
- [6] Symvonis, A.: Quality Assurance Plan. Deliverable D1.1, iLearnRW project (2013)
- [7] Toli, E.: Quality Plan. Deliverable D6.2, SUCRE project (2012)
- [8] Polidori, C.: Quality Plan. Deliverable D1.1, ZAPHYR project (2012)
- [9] Schmitz, H.-C. (ed.): Project Handbook. Deliverable D.10.2, ROLE project (2010)
- [10] European Qualifications Framework. Available online:  
[http://ecahe.eu/w/index.php/European\\_Qualifications\\_Framework](http://ecahe.eu/w/index.php/European_Qualifications_Framework) (last access: 25 September 2016)

# Appendix A

## Course Specification Template

Course Name.....

Course Code .....

No. of Credit Hours.....

Type of Course (Core, Elective).....

Prerequisite.....

Course Level .....

No. of weekly hours      Theory      Practical

Course Description

.....  
.....  
.....

Course aims and objectives

.....  
.....  
.....

### I. Intended Learning Outcomes of Course (ILOs)

#### *a. Knowledge and Understanding*

On completing the course, students should be able to:

K.1 Define the .....

K.2 Describe ....

K.3 Recognize ... |

#### *b. Intellectual/Cognitive Skills*

On completing the course, students should be able to:

I.1 Make a feasibility study for a specific system.

I.2 Differentiate....

I.3 Choose ....

I.4 The ability ....

I.5 Perform .... |

#### *c. Practical/Professional Skills*

On completing the course, students should be able to:

- P.1 Design, test, and evolve a ....
- P.2 Maintain ....
- P.3 Learning how to develop a ....
- P.4 Apply ....
- P.5 Conduct .... |

***d. General and Transferable Skills***

On completing the course, students should be able to:

- G.1 Design ....
- G.2 Manage .... |

**II. Course Matrix Contents**

	Main Topics / Chapters	Duration (Weeks)	Course ILOs Covered by Topic (By ILO Code)			
			K & U	I.S.	P.S.	G.S.
1-		2	K1	I1,I2	P5	
2-		3	K2,k3	I4,I5	P1,P4	G1
3-		2		I3	P1,P4	
4-		3		I3	P1,P3	
5-		2			P1,P2,P3	G2
<b>Net Teaching Weeks</b>		<b>13</b>				

**III. Course Weekly Detailed Topics / hours / ILOs**

Week No.	Sub-Topics	Total Hours	Contact Hours	
			Theoretical Hours	Practical Hours *
1		3	3	3
2		4.5	3	1.5
3		4.5	3	1.5
4		4.5	3	1.5
5		4.5	3	1.5
6		4.5	3	1.5
7	<b>Midterm Exam</b>			
8		4.5	3	1.5
9		4.5	3	1.5

10		4.5	3	1.5
11	..	4.5	3	1.5
12		4.5	3	1.5
13		4.5	3	1.5
14				
15	<b>Final Exam</b>			
<b>Total Teaching Hours</b>		<b>57</b>	<b>39</b>	<b>18</b>

\* No Practical/Tutorial during the first week of the semester

#### IV. Teaching and Learning Methods

Teaching/Learning Method	Selected Method	Course ILOs Covered by Method (By ILO Code)			
		K & U	Intellectual Skills	Professional Skills	General Skills
Lectures & Seminars	Y	K1,K2	I1,I2,I5	P2	G2
Tutorials					
Computer lab Sessions					
Practical lab Work	Y	K3	I3,I4	P1,P3,P4	
Reading Materials					
Web-site Searches					
Research & Reporting					
Problem Solving / Problem-based Learning					
Projects					
Independent Work	Y		I5		
Group Work	Y		I4,I5	P5	G1
Case Studies					
Presentations					
Simulation Analysis					
Others (Specify):					

#### V. Assessment Methods, Schedule and Grade Distribution

(remove & adapt rows as needed)

Assessment Method	Selected	Course ILOs Covered by Method (By ILO Code)				Assessment Weight / Percentage	Week No.
		K & U	I.S.	P.S.	G.S.		
Midterm Exam	Y	All	All	P1,P2,P3	All	20%	7
Final Exam	Y	All	All	P1,P2,P3	All	60%	15
Quizzes							
Course Work	Y	All	All	P1,P2,P3,P4	All	5%	Every week
Report Writing							
Case Study Analysis	Y				All		
Oral Presentations							
Practical	Y		I4	P1,P3,P5,P4	All	5%	11
Group Project							
Individual Project	Y	All	All	P1,P2,P3	All	10%	12
Others (Specify):							

## VI. List of References

<b>Essential Text Books</b>	•
<b>Course notes</b>	• None
<b>Recommended books</b>	•
<b>Periodicals, Web sites, etc ...</b>	• None

## VII. Facilities required for teaching and learning

- None